tech.mit.edu



WEATHER, p. 2

TUE: 68° F | 50° F
Sunny

WED: 68° F | 54° F
Sunny

THU: 67° F | 55° F
Mostly sunny

Tuesday, September 24, 2013

Innovation Initiative

Manufacturing focus of new initiative

By Leon Lin

ASSOCIATE NEWS EDITOR

President L. Rafael Reif announced Friday a new Innovation Initiative at MIT for research and education focused on the role of manufacturing in "accelerating" innovation, which he called the "signature competitive advantage" of the United States.

Reif made the announcement in 10-250 before dozens of industry leaders, who had gathered to hear the findings of a two-year study conducted by the 20 faculty members and 12 students of the Production in an Innovation Economy Commission, co-chaired by political science Suzanne Berger and biology professor Philip A. Sharp.

The study asserts that domestic manufacturing is key to long-term innovation

in the United States, despite the rise of companies like Apple, whose products are manufactured mostly outside of the country.

"For us at MIT, that feels like a call to action," said Reif at the conference. The study also emphasized the role of institutions that set industry standards, coordinate resource-sharing, and help individual firms pool risks. It cited as examples SEMATECH, a consortium of semiconductor manufacturers, and a Massachusetts county employment board, which brought together machining firms and vocational schools during a labor shortage. Such institutions generate public goods, the study says, that reduce the barriers to innovation for any one firm.

In the vein of the MIT Energy Initia-

Innovation Page 10



DOMINICK REUTER, COURTESY OF THE MIT NEWS OFFICE

Professor Suzanne Berger, above, and Professor Philip A. Sharp co-chaired the Production in the Innovation Economy Commission, which just finished its two-year study of the U.S. manufacturing sector's role in supporting innovation.

MIT Medical administered 13,492 flu vaccines in 2012

Many still do not receive vaccine; annual MIT walk-in clinics starting Oct. 2 on third floor of W20

By Rosa Ruiz

In addition to changing leaves and cooler temperatures, October brings with it the official start to flu season. According to the Centers for Disease Control and Prevention (CDC), the flu season can last until May. In response, MIT Medical will once again hold free flu vaccination clinics.

Flu vaccines are offered at MIT Medical's annual walk-in clinics or by appointment and are free to all MIT students, staff, retirees, and anyone enrolled in a MIT Medical health plan. The clinics will occur on Wednesday, Oct. 2 and Oct. 10 from 10 a.m. to 4 p.m. on the third floor of the Student Center. There

will also be clinics throughout October in Lexington for Lincoln Laboratory employees. Children under age 10 may not receive flu shots at the Student Center clinics but may receive them by appointment if over six months old.

According to Deborah Friscino, director of operations at MIT Medical, 2012 saw 13,492 people vaccinated, including 4,601 people on the student/affiliate health plan. It was a record year in the number of flu vaccines administered at MIT, with 5,500 vaccinated in two days of flu clinics alone. David Diamond, associate medical director of MIT Medical, explained, "Each year we give more flu vaccines than [the previous year]; we anticipate giving

nearly 12,000 shots before this season is over."

Nevertheless, there are still many students who do not receive the shot. Citing interviews of MIT students conducted during the flu pandemic three years ago, Diamond wrote in an email to The Tech, "Probably the most common reason [for not getting vaccinated] for all is that they do not feel at risk and therefore don't need it." Diamond noted that students are "not at high risk unless there is a really bad outbreak or they have health issues to begin with." But even a healthy student may miss up to a week of classes while recovering.

"For the average busy, overworked, time-pressured MIT student, the protection of getting a flu shot is the smart choice," said Diamond, adding that wait times at the clinics are usually under 10 minutes.

While past shots only protected against one strain of influenza B and two strains of influenza A, this year's flu shot covers an additional strain of influenza B, as well as H1N1, according to MIT Medical's website about the vaccinations.

According to the CDC, for the flu shot to be widely effective, as many people as possible need to be vaccinated. They recommend that everyone over the age of six months receive a flu shot, especially those with asthma, diabetes, or chronic lung disease.

Addressing concerns about the

usefulness of the flu shot, the CDC states that the effectiveness of the flu shot "can range widely from season to season," depending on the person who is receiving the shot, and how similar the flu vaccine is to the flu viruses actually passing through the community. However, receiving the vaccine will still reduce the chance of infection. People vaccinated last year still need one this year. Since it takes two weeks after the shot for the body to grow the antibodies to fight influenza, it is best to get vaccinated as early as possible.

For more information about flu vaccinations at MIT, visit http://medweb.mit.edu/about/news/flu/index.php.

RACHEL E. AVILES—THE TECH

Undergraduate students, graduate students, and alumni waited to enter the Fall Career Fair on Friday, September 20, in a line that went from the Z-Center, down Mass Ave and onto Amherst Street. The career fair provides opportunities to find internships and full time positions, as well as collect lots of free "swag" from companies.

IN SHORT

The UROP Fall Direct Funding deadline is Thursday, Sept. 26. Submit your application at https://sisapp.mit.edu/uropweb/home.mit.

The Fall 2013 final exam schedule is now online at http://web. mit.edu/registrar/classrooms/exams/finals/index.html.

Send news information and tips to news@tech.mit.edu.

FYRE results reveal disparity in dorm demand

This was the second year of the First Year Residence Exchange (FYRE), the process allowing freshmen to switch their dorm assignment. Participation dropped from 159 to 124 students. As of this year, students could no longer move into Maseeh Hall during FYRE, but the total number of moves increased from 96 to 107.

As in previous years, Baker house was the most popular

dorm with 30 first choices of the 124 students who entered the lottery. Simmons followed with 22 first picks, and MacGregor with 16. In last place, with two movein requests, was New House. New House also saw the most residents try to leave the dorm through FYRE — 24 percent of New House freshmen wanted to move out. Of these, only two lived in cultural houses. "The cultural houses use a mutual

selection process, so students are not assigned to the houses unless it is one of their top choices and the individual agrees to the assignment," said Connie Hemenway, a communications manager with the Division of Student Life. East Campus and MacGregor followed with 18 percent each.

Lucas A. Orona '14, president

FYRE, Page 9

Slight increase in bids given in sorority recruitment

The MIT Panhellenic Association held sorority recruitment for five of MIT's six sororities beginning Aug. 31 with an afternoon kickoff on Kresge Oval and ending with bid night on Sept. 4. The "4-day process [is] designed to introduce [women] to MIT sorority life," according to the association's online FAQ page.

MIT's sororities issued more bids this year than they have in each of the past two years, with a total of 189 bids, up from 173 bids in both 2011 and 2012. Sigma Kappa issued the most bids this year, with a total of 39. No sorority participating in formal recruitment issued fewer than 37 bids, with Alpha Phi and Pi Beta Phi each issuing 38 bids and Alpha Chi Omega and Kappa Alpha Theta each issuing 37. MIT's smallest sorority, Alpha Epsilon Phi did not participate in formal recruitment due to their small size and their desire to host low-key events and issue fewer bids than

other sororities, according to Natanya R. Kerper '14, the sorority's Vice President of Membership and Recruitment

The Panhellenic Association's vice president of recruitment Stephanie Holden '13 (also a *Tech* associate news editor) is happy with the improved numbers and commented that she is "pleased to see improved attention for recruitment."

—William Navarre

AN ILLUSORY TRADE-OFF

Working for a large corporation isn't necessarily complacent. **OPINION**, p. 4

Q.E.D.: CROSSWALK DILEMMA

The light is blinking. Should you make a run for it? **FUN, p. 5**

WHERE DO I FIND WHITE DOVES

For stellar wedding reviews? **FUN, p. 5**



INTRODUCING: SKETCH YOUR LOOK

How to avoid high prices and sketchy products while still being stylish.

CAMPUS LIFE, p. 7

FINDING HOME AT A HACKATHON

t=0 hackathon brought together MIT's doers and innovators.

CAMPUS LIFE, p. 6

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Boston's police commissioner plans to step aside

BOSTON — Edward Davis, the Boston police commissioner who rose to national prominence after the marathon bombings in April, said Monday that he was stepping down voluntarily from his job in the next month or two.

The announcement touched off speculation that he might be in line for a higher post, perhaps at the Department of Homeland Security, which has been without a leader since Secretary Janet Napolitano left this month.

But Davis, 57, said at a packed news conference at police headquarters here that he was leaving simply because "it's time to go." He said he would not engage in speculation about his future but that he had received "several offers" and it would take him a couple of months to sort them out. He has also been offered a fellowship at Harvard's Institute of Politics and hopes to accept it.

Davis said his seven years as commissioner was twice the tenure of urban police commissioners. He also said he wanted to "clear the deck for the new administration." The city is preparing to elect a replacement for Mayor Thomas M. Menino, who appointed Davis in 2006 and who is stepping aside early next year after 20 years as mayor.

Davis' tenure has been an issue in the mayor's race, with several of the dozen candidates saying he has not placed enough minority officers or women in the top ranks of the department. He defended his record Monday, saying 42 percent of his command staff were "people of color and diversity," but he also said he had been hamstrung by certain court rulings. He urged the city's future mayor to "keep diversity high on the list of priorities" and "make sure this Police Department is reflective of the community it serves."

Davis drew wide praise for his role in the police response to the Boston Marathon bombings, which killed three people and injured more than 260 on April 15.

—Katharine Q. Seelye and Jess Bidgood, The New York Times

Cambodian opposition boycotts opening of Parliament

BANGKOK — Despite a boycott over a disputed election that left dozens of seats vacant in the National Assembly, the king of Cambodia opened a new session of Parliament on Monday attended by the long-serving, authoritarian prime minister, Hun Sen, and his fellow party members.

King Norodom Sihamoni made no mention of the boycott in his speech. "The Cambodian nation must stand united," the king said, according to news reports from Phnom Penh.

The king had sought in vain to broker an end to the acrimony after Hun Sen's foes claimed widespread cheating in the July 28 election and rejected the official results, which left Hun Sen's Cambodia People's Party in the majority, though weakened.

But the prime minister, who has ruled the country for 28 years, appears willing to govern Cambodia without the cooperation of the opposition. Despite threats of more of the mass protests that have been disrupting the country, he is expected to begin his new term Tuesday in a largely procedural vote.

Still, Hun Sen has projected what some analysts see as unusual signs of weakness. He has made uncharacteristic, conciliatory gestures, including holding three recent meetings with Sam Rainsy, the leader of the opposition Cambodia National Rescue Party. One lasted almost five hours and centered on changes to the country's electoral system.

Analysts disagree on whether Hun Sen, who in the past was dismissive of the opposition, is biding his time or has been significantly damaged by the election.

In its worst showing since 1998, the Cambodian People's Party won just 68 seats of the 123 in the National Assembly, compared with 55 for the opposition, which made its greatest gains in a decade thanks to Rainsy's newly unified party. The opposition says it would have captured the majority in a fair election.

—Thomas Fuller, The New York Times

Former FBI agent pleads guilty in leak to the AP

By Charlie Savage
THE NEW YORK TIMES

WASHINGTON — A former FBI agent has agreed to plead guilty to leaking classified information to *The Associated Press* about a foiled bomb plot in Yemen last year, the Justice Department announced Monday. Federal investigators said they identified him after obtaining phone logs of Associated Press reporters.

The retired agent, a former bomb technician named Donald Sachtleben, has agreed to serve 43 months in prison, the Justice Department said. The case brings to eight the number of leak-related prosecutions brought under President Barack Obama's administration; under all previous presidents, there were three such cases.

"This prosecution demonstrates our deep resolve to hold accountable anyone who would violate their solemn duty to protect our nation's secrets and to prevent future, potentially devastating leaks by those who would wantonly ignore their obligations to safeguard classified information," said Ronald C. Machen Jr.,

the U.S. attorney for the District of Columbia, who was assigned to lead the investigation by Attorney General Eric H. Holder Jr.

In a twist, Sachtleben, 55, of Carmel, Ind., was the subject of a separate FBI investigation for distributing child pornography, and has separately agreed to plead guilty in that matter and serve 97 months. His total sentence for both sets of offenses, should the plea deal be accepted by a judge, is 140 months.

A Justice Department court filing claims that Sachtleben disclosed the fact that the Central Intelligence Agency had foiled a bomb plot in Yemen to an unnamed reporter — *The Associated Press* was not identified in the filing — on May 2, 2012. The news service broke the news that a plot had been foiled in Yemen on May 7.

A year later, it became known that the Justice Department had secretly subpoenaed phone companies for calling records for 20 phone lines of *Associated Press* offices and reporters, without providing advance notice to the organization so they could negotiate over the scope

of the effort or ask a judge to quash the subpoena.

The disclosure helped set off a furor among journalists and members of Congress over the Justice Department's aggressive methods in carrying out leak investigations, and Holder, who was recused from that investigation, later issued new guidelines tightening the circumstances by which investigators could go after reporters' information.

The calling records proved crucial to identifying Sachtleben, the Justice Department said. An official familiar with the investigation said the FBI had conducted more than 550 interviews at that point but had not managed to identify a suspect. The records showed communications between the reporter and Sachtleben, who became a suspect.

"Sachtleben was identified as a suspect in the case of this unauthorized disclosure only after toll records for phone numbers related to the reporter were obtained through a subpoena and compared to other evidence collected during the leak investigation," the Justice Department said in a statement.

Chrsyler files for IPO under pressure from second-largest shareholder

By Bill Vlasic

THE NEW YORK TIMES

DETROIT — Chrysler's plan for a public stock offering would ordinarily be cause to celebrate the automaker's comeback from its government bailout and bankruptcy in 2009. But the company's filing for the offering, which came late on Monday, is hardly a moment of triumph.

Chrysler is taking the step only under pressure from its second-largest shareholder, a trust set up to provide medical coverage for 115,000 retired auto workers and family members. And while the offering would generate needed cash for the trust, it would also thwart plans by Fiat, Chrysler's Italian parent, to acquire full ownership of the American automaker.

The Detroit automakers have large financial responsibilities to their retirees. On Monday, General Motors said it would raise money in the bond market to buy preferred stock in the company owned by its retiree health-care trust at a cost of \$3.2 billion.

Chrysler's offering arises from an unusual conflict of interests, made possible by the remarkable turnaround at Chrysler since it was shepherded through bankruptcy four years ago by the federal government.

The United Auto Workers health care trust has the legal right to cash in a big chunk of its stake in Chrysler, which today stands at 41.5 percent and is a legacy of a deal brokered in 2009 by the Obama administration's auto task force. At the time, the deal was seen as a last-ditch effort to save the faltering automaker, while also preserving labor peace with the HAW

Now, with profits flowing again and the trust in need of cash, it has formally requested that Chrysler register for a public offering covering about 16 percent of the company's overall shares. The offering is another sign of how Chrysler — as well as General Motors — has recovered since the bailout. In the case of GM, the Treasury Department is continuing to sell off its ownership position, and now owns less than 8 percent of the company's stock.

The offering, however, is not supported by Sergio Marchionne, the chief executive of both Fiat and Chrysler and the architect of the American company's revival.

Marchionne is easer to merge the

Marchionne is eager to merge the two companies into one international auto giant. And to do so, he needs to acquire the trust's entire 41.5 percent stake.

But there is a wide gap between what Fiat wants to pay for the shares, and what the trust's administrators believe they are worth. After months of unsuccessful negotiations, the trust wants to establish the shares' value in the stock market — and reap a windfall for a portion of its stake.

WEATHER

Eternal sunshine of the Fall semester

By Vince Agard

STAFF METEOROLOGIST

The Institute will once

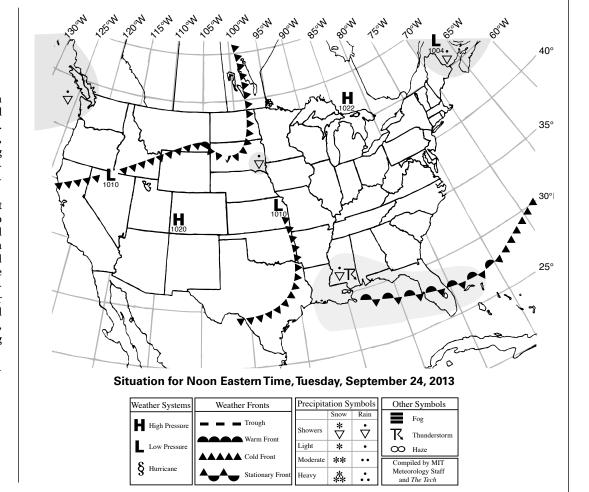
again experience a string of sunny days this week, with light winds and seasonable temperatures. This weather pattern will be quite similar to that of last week, in which a high pressure system was situated over New England for a majority of the week. Last week's high pressure system resulted in sunshine from Tuesday through Saturday, before a cold front came through on Saturday night. Likewise, that cold front has ushered in a new high pressure system,

which is expected to remain in place through the weekend and potentially into next week. The result will be clear skies, with temperatures reaching the upper 60s (°F) in the afternoon, and falling into the lowto-mid 50s (°F) overnight.

This streak of dry, pleasant days stands in stark contrast to the recent rain event in central Colorado. A historic storm on the week of Sept. 9 dumped over 1 foot of rain over the Boulder area. This rainfall accumulation represented over 1000% of the normal rainfall for that area in this time of year, and contributed to devastating floods in several communities.

Extended Forecast

Today: Sunny, high 68°F (20°C). Winds NW at 10–15 mph. Tonight: Clear, low 50°F (10°C). Winds W at 5–10 mph. Tomorrow: Sunny, high 68°F (20°C). Winds N at 5–10 mph. Thursday: Mostly sunny, highs in the upper 60s °F (19°C). Friday: Mostly sunny, highs in the upper 60s °F (20°C).



Pakistan Christians demand protection after church bombing

By Declan Walsh

THE NEW YORK TIMES

LONDON — With its Muslimstyle minarets topped by a large black cross, the All Saints Church in Peshawar, Pakistan, has for more than a century offered a daring architectural expression of Muslim-Christian harmony and cohabitation.

This is how the Taliban destroyed it: two suicide bombers rushed the church doors as worshipers streamed out on Sunday. One attacker exploded his vest inside, the other just outside.

The death toll had risen to 85 by Monday evening, when Christians across the country protested the worst atrocity their community has suffered in Pakistan's history.

Crowds blocked roads, burned tires and waved wooden crosses as they marched in Islamabad, Lahore, Karachi and Peshawar.

Many shouted demands for government protection, while also voicing skepticism about whether Prime Minister Nawaz Sharif's government could stave off future attacks. Mission schools announced that they would close for three days.

For government critics, the atrocity highlighted the continuing failure of the state to protect minorities against hate attacks. Hundreds of Shiites, in particular, have been killed in devastating attacks over the past year.

But it also further roiled a debate about a recent political decision to start peace talks with the Pakistani Taliban, billed as an attempt to stem the bloodshed.

"Pakistan's politicians are failing at the most basic of questions — about what kind of Pakistan they want to shape and lead," said Cyril Almeida, a writer with Dawn newspaper. "Whether out of sympathy, fear or cowardice, no one is willing to stand up to radical Islamists and say, 'No, enough is enough, we are taking our country back""

Christians in Pakistan already contend with deep-rooted prejudice. Most are poor and traditionally carry out menial work like sweeping street garbage and cleaning sewers. Muslim mobs, enraged by rumors of blasphemy, occasionally rampage through Christian slums, and have burned hundreds of houses. Extremists killed the Christian minorities minister Shahbaz Bhatti in early 2011.

Still, Sunday's attack touched a raw nerve across sectarian lines. Clerical organizations and all major political parties issued statements of condemnation. On Monday, Parliament passed a resolution condemning the bombing as "an attack on Pakistan."

Perhaps the sharpest political fallout has been felt by Imran Khan, the former cricket star who has long urged a truce with the Taliban and whose political party runs Khyber-Pakhtunkhwa province, where the bombing took place.

On Sunday, Khan, who is more used to adulation at his public appearances, was jeered by Christians with cries of "shame" and "Imran is a dog" when he arrived at a Peshawar hospital where victims were being treated.

Egyptian court bans Muslim brotherhood

By David D. Kirkpatrick

THE NEW YORK TIME

CAIRO — An Egyptian court on Monday ordered the dissolution of the Muslim Brotherhood and the confiscation of its assets, sharply escalating a broad crackdown on the group in the three months since the military ousted its ally, Mohammed Morsi, from the presidency.

The court ruling formalizes the suppression of the group, and comes after mass shootings of more than 1,000 pro-Morsi demonstrators and the arrest of thousands of Brotherhood members and almost all of the group's leaders. Even before Morsi was overthrown, the police watched idly as a crowd of anti-Brotherhood protesters methodically burned down its gleaming headquarters, capping weeks of attacks on its officers around the country.

The Brotherhood, Egypt's mainstream Islamist group, spon-

sored the political party that won the most votes in recent elections. So the court's formal prohibition of the Brotherhood makes it harder for the new government appointed by Gen. Abdel-Fattah el-Sissi to fulfill its promises of a new, inclusive democratic process - one that would be open even to Morsi's Islamist supporters. Instead, the ruling pushes the Brotherhood back underground, where it was for most of its 85-year history before the 2011 revolution that ousted former President Hosni Mubarak allowed the group to operate in the open.

The decision was issued by the Cairo Court for Urgent Matters. Some Islamist lawyers questioned the court's jurisdiction, and vowed to appeal. The court ordered that all the Brotherhood's assets, including real estate it owned or leased, be held in trust until the appeals were resolved.

But the appeals seemed unlikely to settle the matter, because the

Brotherhood faces similar litigation in other jurisdictions as well.

Monday's ruling addressed a lawsuit filed by the leftist party Tagammu, which accused the Brotherhood of being a terrorist organization and of "exploiting religion in political slogans." Laying out its decision, the court reached back to the Brotherhood's founding in 1928, when Egypt was ruled by a British-backed monarchy, and argued that the organization had always used religion as a cover for its political goals.

The state newspaper Al Ahram gave its own rationale for the ban, saying Monday that since winning power at the polls the Brotherhood had "violated the rights of the citizens, who found only oppression and arrogance during their reign" until the public had risen up to protest "under the protection of the armed forces; the sword of the homeland inseparable from their people in the confrontation with an unjust regime."

Iranian official to meet major powers on nuclear dispute

By Somini Sengupta and Rick Gladstone

THE NEW YORK TIMES

UNITED NATIONS — Iran's new foreign minister will meet counterparts from the five permanent Security Council members plus Germany later this week at the U.N. to discuss resuming talks on the protracted dispute over his country's nuclear program, the European Union's top foreign policy official said Monday after meeting with the Iranian minister for the first time.

The European official, Catherine Ashton, told reporters at a brief news conference on the sidelines of the annual General Assembly session that in her meeting with the Iranian minister, Mohammad Javad Zarif, on Monday morning, she saw "energy and determination" in his approach but also said, "There's a huge amount of work to do."

A meeting between Zarif and the Security Council members, which would include Secretary of State John Kerry, would be one of the highest-level face-to-face contacts between Iran and the U.S. in more than three decades.

Ashton is the lead negotiator for the so-called P5-plus-1 countries - the five permanent Security Council members, Britain, China, France, Russia and the U.S., plus Germany - which have been conducting on-again, off-again negotiations with Iran for years on the nuclear dispute, with no substantive progress.

Zarif is a U.S.-educated diplomat appointed by the new Iranian president, Hassan Rouhani. Both have sought to distinguish themselves from the hard-line approach of the last president, Mahmoud Ahmadinejad. They have been outspoken in asserting that Iran is ready to advance the negotiations on the nuclear dispute, which has

drawn heavy Western sanctions and left the country increasingly isolated economically.

Iran has asserted that its program of uranium enrichment is for peaceful purposes, denying assertions from the West and Israel that it is developing the capability to make nuclear weapons.

The Israeli government, which particularly mistrusts Iran's nuclear intentions, has dismissed the new Iranian diplomatic effort as a public relations maneuver, and was rattled by an exchange of letters between Rouhani and President Barack Obama that suggested the real possibility of a diplomatic compromise.

Ashton described her discussions with Zarif as constructive, but she provided no details on the substance of the impending meeting with the P5-plus-1 ministers. She described the purpose of her meeting with Zarif as establishing "how we would go forward."

China's quest for energy is a game-changer for central Asia

ATYRAU, Kazakhstan — On the northern reaches of the Caspian Sea, not far from this old Soviet town known for its oil and sturgeon, lies a vast new oil find, the biggest outside the Middle East. China was rebuffed when it asked for a stake 10 years ago.

But when the pumps finally started this month, the China National Petroleum Corp. had won a share in the project, known as Kashagan, and President Xi Jinping was in the region recently to celebrate, another indication that China's influence has eclipsed even Russia's across the former Soviet republics of Central Asia.

China's urgent quest for energy is the main driver of its strategic interest in a region close to home, where proximity allows huge reserves of oil and gas to be moved overland through Chinese-built pipelines rather than by ship through American-dominated sea lanes from the Middle East.

Here in Kazakhstan, Xi formalized the \$5 billion deal for Kashagan that for the first time places China in a consortium alongside the big international players: Exxon Mobil, Shell, Total and the Italian company, ENI.

—Jane Perlez and Bree Feng, The New York Times

Record cocaine haul in France raises security questions

PARIS — A record haul of cocaine, found in glossy, bright suitcases on an Air France arrival from Venezuela, is raising a multitude of questions about the security of the baggage scanning system and the possibility of collusion either by airport or airline staff both in Venezuela and France.

The seizure this month was disclosed Saturday by the interior minister, Manuel Valls, but French officials would not specify when they had impounded the cocaine or the exact circumstances.

Valls, who showed the cocaine, tightly wrapped in plastic packaging, to French television, said there had been 1.3 metric tons, or about 2,900 pounds, with a value of \$67 million. Others put the value considerably higher.

As of Monday, six people were in police custody, said a spokeswoman for the Paris prosecutor's office, Agnes Thibault-Lecuivre. She said that not one of the six was French, but news agencies reported that three were British and three were Italian. And, in Venezuela, three members of the National Guard were detained.

The haul was remarkable both for the amount, the largest ever in France, and because it arrived by air, said Thomas Pietschmann, research officer at the Studies and Threat Analysis section of the United Nations Office on Drugs and Crime in Vienna, which tracks drug trafficking worldwide.

"To have one ton on an airplane is exceptionally high," Pietschmann said. "It starts from a few grams to a few kilos."

—Alissa J. Rubin, The New York Times

Blackberry reaches \$4.7 billion deal to go private

BlackBerry said on Monday that it had reached an agreement to be taken private by a group led by Fairfax Financial Holdings.

The company signed a letter of intent that would pay shareholders \$9 a share in cash, a deal which values the faltering smartphone maker at about \$4.7 billion, according to a media release. Fairfax already owns 10 percent of BlackBerry.

BlackBerry entered into the agreement on the recommendation of a special committee of its board, which has been evaluating strategic options for the company as its market share has continued to erode in recent months.

Fairfax and its co-investors are seeking financing from Bank of America Merrill Lynch and BMO Capital Markets.

BlackBerry and Fairfax agreed to complete due diligence by Nov. 4. During this time, BlackBerry is permitted to enter into talks with other potential acquirers. The press release did not identify the other investors joining with Fairfax. "The special committee is seeking the best available outcome for the company's constituents, including for shareholders," Barbara Stymiest, BlackBerry's chairwoman, said in a statement. "Importantly, the go-shop process provides an opportunity to determine if there are alternatives superior to the present proposal from the Fairfax consortium."

If BlackBerry backs out of the potential Fairfax deal or finds another buyer, it would owe Fairfax a fee of 30 cents a share, or \$157 million. It would owe Fairfax \$262 million if it walked away from a signed agreement.

—David Gelles and Ian Austen, The New York Time

After re-election, Merkel moves to form new German government

BERLIN — Chancellor Angela Merkel took steps on Monday to form a new government, a day after she scored a stunning personal triumph in German national elections that cemented her position as the most powerful politician in Europe.

Merkel became the only major European leader to be re-elected twice since the financial crisis of 2008, winning a strong popular endorsement for her mix of austerity and solidarity in managing the troubled eurozone.

On Monday morning, Merkel met with leaders of her center-right Christian Democratic party to discuss strategy for forming a coalition government, most likely with the center-left Social Democrats, who finished second in the polling. The negotiations are likely to take weeks or months, extending a de facto moratorium on European decision-making that has been in effect during the German election campaign. Merkel said Monday that she did not expect German policy toward the eurozone to change, a statement that is likely to come as a disappointment to other European leaders who hoped she would be open to bolder action once the election was behind her.

The surprising show of strength for Merkel and the Christian Democrats — even their own polls had not suggested 41.5 percent of the popular vote — was just short of an absolute majority, according to preliminary results published on Monday. No chancellor has achieved an absolute majority since Konrad Adenauer in 1957.

—Alison Smale and Jack Ewing, The New York Times



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An illusory trade-off Is working for a corporation a selfish or complacent use of an MIT education? Not necessarily.

By Jacob London

OPINION EDITOR

In Friday's issue of The Tech, Madeline O'Grady '16 asserts that MIT students should be "better than the career fair." Instead of settling for comfortable, lucrative jobs with corporations, she writes, we should aspire to solve the world's most challenging problems.

O'Grady goes on to lament the fact that students are not only settling for these jobs, but many even seem to prefer them to more altruistic career paths.

The problem with O'Grady's argument is that it ignores the contributions corporations have made to expanding opportunity for millions of people and also the role corporations have played in trying to solve the problems that have come with expansion.

Have the interests of large corporations and private companies always aligned with the best interests of society as a whole? Of course not. But what should not be overlooked is the fact that profit-driven companies and industries have contributed in significant ways to addressing many of the challenges that have confronted societies since the onset of the industrial era.

Just a cursory browse through the career fair brochure yields a variety of companies that are all addressing important societal challenges. Google has transformed the way people and businesses connect and share information. IBM has driven hardware and software innovation for over a century. And in the face of dwindling public investment in spaceflight, SpaceX has grabbed the baton in an attempt to sustain our collective reach for

True, some major investment banks exploited lax regulation and consumers' lack of information to trigger the great recession. But one must look at the bigger picture. Investment banks have been critically important in fostering entrepreneurship, economic growth, job creation, and products (think pharmaceutical and medical products, fuelefficiency technology, irrigation systems) that have improved life for untold numbers of people in the last two centuries. Even the banks that were entangled in the 2008 financial crisis played key roles in accelerating global economic growth and opportunity over the past 50 years. Furthermore, these companies are often the only ones equipped to provide tailored expert advice as firms take on the challenges of an increasingly globalized economy.

Students shouldn't be condemned for trying to provide a better future for themselves and the families they may one day start.

Fossil fuel corporations are certainly contributing to the alarming advance of climate change, but should they really shoulder all of the blame for our international dilemma? They are supplying a commodity that the world demands, but at the same time, they have been pouring resources into alternative energy research and development. In their own self-interest, they are diversifying perhaps later than they should have — but diversifying and investing in new technologies nonetheless. They are part of the problem, for sure, but also increasingly part of the

Corporations address problems indirectly as well. I'd imagine that O'Grady would applaud those students who elect to pursue careers in academia. After all, that's where she would suggest that many real world problems are solved.

But money for this research has to come from somewhere. Between corporate research and development, and private contributions to universities, businesses do a great deal to support applied research — all the more important at a time when federal funding (the lifeblood of post-war scientific research) is being eviscerated by the sequester. Moreover, universities are built and funded by major gifts from corporations and wealthy capitalists who become philanthropists.

But for the sake of argument, let's assume that corporations never help to solve important problems, and that they don't fund applied research. Should students still be "better than the career fair"? A large and growing portion of college students face enormous student loan debts, and they are under incredible pressure to begin repaying those debts as soon as they graduate. Should they be condemned for pursuing well-paying jobs to pay off those debts? Should students be condemned for trying to provide a better future for themselves and the families they will one day start?

Granted, not all corporations are helping to solve important problems; and even if a corporation is providing value to society, it isn't necessarily motivated by a sense of social responsibility. The challenge for those students who do decide to take jobs in the private sector is to look for ways to influence corporate cultures from within, to push them in the direction of social responsibility. Today's job-seeker will be tomorrow's business leader. And through enlightened leadership, companies large and small can do more and more to mitigate the adverse by-products of business, and to contribute to the solution of social, economic, and environmental problems

Ultimately, O'Grady raises an important question — to what extent should we balance our individual need for some measure of financial security with a selfless drive to solve the world's problems? I commend O'Grady's idealism, but the answer isn't always a trade-off.

Unfortunately, there is so much in this world that needs to be improved. Fortunately, there are plenty of ways to go about improving it.



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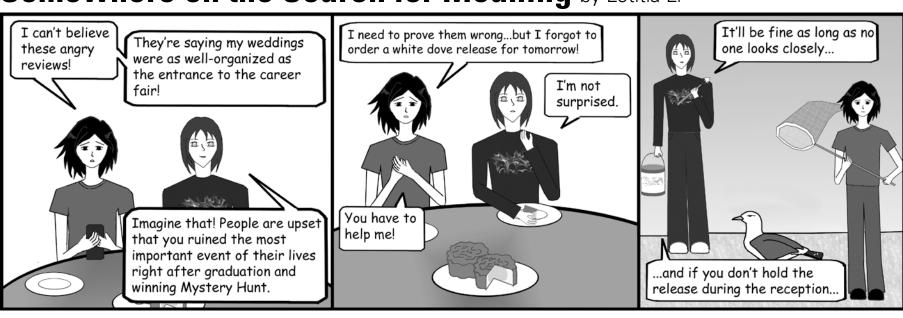
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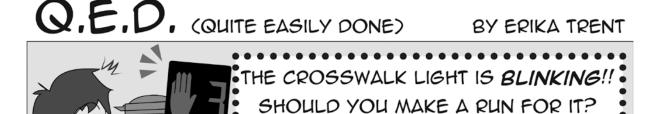
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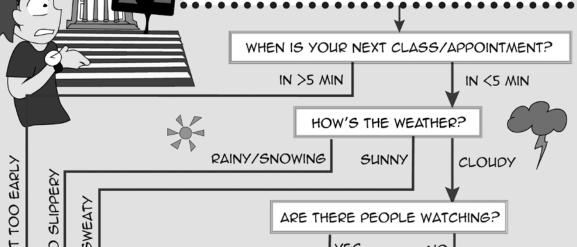
Tuesday, September 24, 2013 THE TECH 5

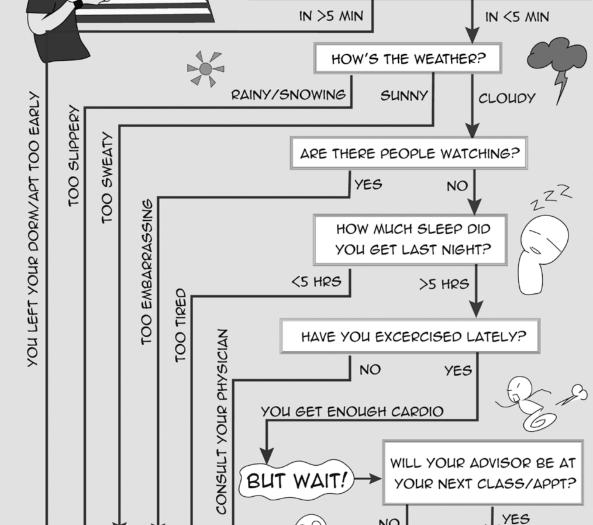
Somewhere on the Search for Meaning by Letitia Li











WAIT AT THE CROSSWALK,

REALIZE LIFE'S NOT A RACE

AND DISCOVER

INNER PEACE

NO

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ON YOUR WAY

THOSE WHO DON'T

MATTER, DON'T MIND



A WEBCOMIC OF ROMANCE, SARCASM, MATH, AND LANGUAGE

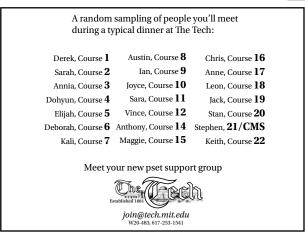
by Randall Munroe

[1267] Mess



MY ROOM NEVER LOOKS AS NICE AS THE ROOMS OTHER PEOPLE APOLOGIZE FOR.

night: OH GOD I APPARENTLY LIVE IN A GAR-'Sorry, I left out my glass of water from last



EVENTS SEPT. 24 – SEPT. 30

TUESDAY

(10:00 a.m. – 12:30 p.m.) Water, Water Everywhere: How clean is it? seminar — E38-300

(7:15 p.m. - 9:00 p.m.) The World's Religions: Precepts Practices and Principle Beliefs — W11-Main dining room

WEDNESDAY

(7:30 p.m. - 9:00 p.m.) Katsura Sunshine presents Japanese Rakugo comic story-telling — 32-123

THURSDAY

(4:00 p.m. - 5:00 p.m.) CSAIL Colloquium: Innovating for Society: Realizing the Transformative Impact of Computing and Communication — 32-G449

(6:00 p.m. - 8:30 p.m.) The Future of MOOCs: Prospects and Pitfalls, the MIT Perspective — 34-101

FRIDAY

(7:00 p.m., 10:00 p.m.) LSC shows Much Ado About Nothing (2012) - 26-100

SATURDAY

(10:00 a.m. - 12:00 p.m.) Animal Petting Zoo — E55-Court-

(6:00 p.m. - 8:00 p.m.) Living in the Future, talk — MIT

SUNDAY

(11:00 a.m. - 3:00 p.m.) MIT Bike Show and Market — N10, Annex parking lot

(4:00 p.m. - 6:00 p.m.) MITHAS presents: Violin Maestro Padmashri Lalgudi G. Jayaraman Memorial Concert & biography book release — E51-Wong auditorium

MONDAY

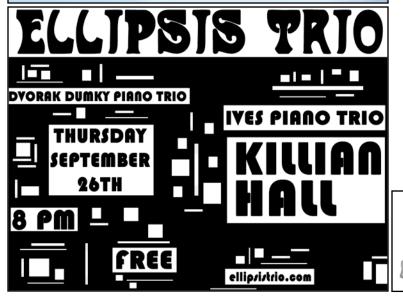
(6:00 p.m. – 7:15 p.m.) Archipelago Town-lines: A sustainable model for urban growth, lecture — 7-429

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STARTUP DIARIES

Hacking my way home

Finding my place on campus at my first MIT hackathon

By Erica Swallow

Walking into last week's t=0 hackathon, the first official hackathon of the school year, I was well aware of my status as a Sloanie, that species of MIT grad student prone to business plan writing and jargon slinging.

As a first-year Course 15, I was still settling in and getting to know my place on campus, a puzzle that I was incredibly anxious to solve. I had arrived on campus a few weeks earlier to scope out the scene, meet new people, and get involved in campus entrepreneurship before orientation week, but still, two weeks into classes, I didn't have a grasp of where I'd fit in (or stand out) among my peers.

hackathon goers could find us, and started strategizing. Before long, classmate Ana Villanueva approached us, mentioning that if she didn't find a team for her social music app idea, she'd love to join us. A glimmer of hope flashed before my eyes and I felt butterflies in my stomach — was Ana our next teammate? After about 10 minutes, fate had its way, and indeed, Ana ioined the cause. I was excited to have her on my team as we had volunteered together the prior week at the demo day for Global Founders' Skills Accelerator, MIT's summer startup accelerator. We spent that day prepping startup founders before they stepped on stage to demo - through that experience, I had learned that Ana was highly

As the hackathon kicked off, more than 100 students graced the stage, armed with 30-second idea pitches.

As the hackathon kicked off, more than 100 students graced the stage armed with 30-second idea pitches. Among the lot, I pitched my concept of a peer-to-peer delivery service that enables locals to connect and help each other out with pickups and drop-offs — such as grocery shopping, dry cleaning, and IKEA runs — that fit into their daily routines.

The quality of ideas was high, with students proposing projects that ranged from storytelling apps for children to sunrise-simulating sleeping masks. The anxiety began to kick in: Did anyone like my idea? Was it innovative enough for MIT? Or had I just totally embarrassed myself during the first month of school?

I had come to the hackathon with one teammate, Kiho Suh, a user experience designer from the Rhode Island School of Design. Kiho and I had met two months prior at another MIT startup event, and he had expressed interest in my idea, which I had also pitched at that event.

The two of us, excited to get started, staked out a table together, drew a sign so that interested interested in fashion and music technology, worked well in a team, and had a way of making everyone around her feel happy and motivated. I could already tell that this was going to be a fun weekend of

At about that time, another classmate, Thomas Iljic, a Frenchman who had lived in Japan for the past seven years, stopped by our table to check out the situation. "Are you guys all on a team?" he asked. Ana beamed and explained the concept behind Deliverish, the name I had come in with for the project. By the end of the conversation, we had another almost-convert — Thomas had proposed an idea, too, and was still on the prowl for teammates. If he could generate interest, he was going to go his own way, but if not, he told us, he'd be down to work with us. The positive energy began flowing, and I exclaimed, "We'd love to have you! There's plenty to do!" He walked off, but within minutes had caved and was back for the adventure. Four strong, we were off to a start.

I had passed my first test as a budding startup founder at MIT - through a 30-second pitch and some quick conversations, I had managed to recruit a team of bright, motivated colleagues to collaborate on a project, and here they were, all sitting at the same table, laptops glowing and ideas flowing, working towards a shared goal.

It was that moment — when we all looked around the table and settled in for a weekend of intense ideation and creation, among homework assignments and other commitments — that I knew I had found my place at MIT. The previous two weeks had been filled with info sessions and orientation events, and as any other doer, I was itching to just get started! "Enough orienting, let's just do this!" I had thought on a number of occasions.

But there, at the first hackathon of the semester, I was joined by a room of creators and doers - it was exactly what I had expected of MIT and was something I had missed among all the introductory events. I loathed, for example, attending the mandatory career development events, which were targeted at those interested in recruiting, not the group of MBAs interested in starting their own businesses.

At the first hackathon of the semester, I was joined by a room of creators and doers.

With many hackathons and startup competitions ahead of me this year, though, I now know that there will be many opportunities ahead to get my hands dirty. I'm looking forward to digging deeper into MIT's hacking culture and aiming to further spread that ethos to Sloan, where models and theories currently prevail. Mens et Manus, my fellow students. Let's rock

For Deliverish's pitch at t=0, see http://www.youtube.com/ watch?v=L1ue_645TQQ.

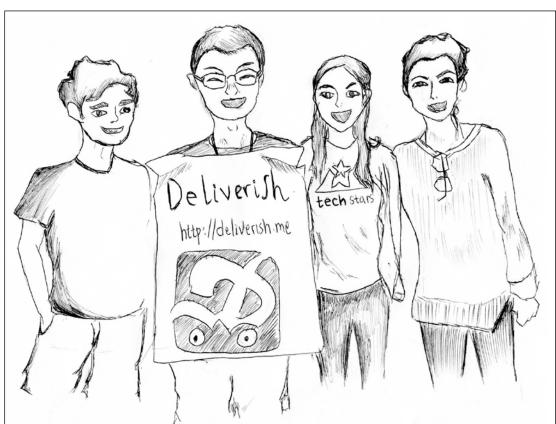


ILLUSTRATION BY HAYOON CHUNG



SKETCH YOUR LOOK

Shopping made easy

How to buy clothes while avoiding high prices and sketchy products

By Dohyun Lee

Introduction

Welcome to the world of fashion. Sketch Your Look will cover the basics of menswear, such as fit, color, fabric, etc., in a detailed manner. I'm sorry to say I have little knowledge in clothes for women, so I won't be writing articles specifically for women. However, I believe that women can get inspiration from menswear too.

This series is not meant to teach you how to wear specific clothing, but to encourage you to realize how much fun getting dressed can be. For the already stylish, this article might seem redundant, but I am sure that you will enjoy it. For beginners, dressing up may

seem strange at first, but you will slowly realize how greatly you've improved fashion-wise. You will ultimately see the result from your peers or from yourself.

This upcoming series will be mostly based on my personal opinions and data that I have accumulated for several years. So, feel free to disagree with my opinions and try your own style.

Shopping 101

For guys, shopping is usually considered a nightmare. It seems boring, difficult, and tedious. Right now, I want to eliminate the "difficult" part of shopping. My method of buying clothes is quite straightforward. I always think of three things: function, style, and comfort. Any type of clothing, even accessories, should satisfy

at least two of the three. Then you will rarely go wrong. Pretty neat, isn't it?

Unfortunately, sometimes we can't buy things because of cost. But a limited budget shouldn't be a barrier. There are thrift stores, second-hand shops, and most importantly, you have the internet. You can always find a good alternative through these ways.

I always think of three things: function, style, and comfort.

Let's take a look at my personal experience. About a year ago, my expensive watch broke when I fell from my skateboard and hit my wrist on asphalt. So, I went to a local mall to buy a new watch, but this time, I did not want to break the bank. After rummaging through multiple racks, I found a beautiful watch, but its price tag scared me away.

Dismayed, I went back home and searched without much hope of finding a sale. And, a miracle! I found an auction on Ebay in which somebody was selling his like-new watch that was one fifth of the original price. The deal seemed great, so I bought it right away, and I was really happy with the condition of it when I received it. As you can tell, there is always an alternative way to purchase items.

However, shopping through the internet or second-hand does not always guarantee a good deal.



ILLUSTRATION BY DOHYUN LEE

Many times, pre-owned items can be defective or fake. The worst

Shopping through the Internet or second-hand does not guarantee a good deal.

situation might be that they are worn out too much that they can fall into pieces in a matter of days. I find these issues very common, so be very cautious when entering this method. But, even if you are being cautious, you are liable to sometimes get defective items through these ways. So, you must check beforehand if the sellers offer a refund system. If they don't, then never buy it.

There are so many different methods for purchasing things, so you should find your own best way. If you are being cautious and active, then I am sure that you will find your own best-fitting items in next to no time.



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ACROSS

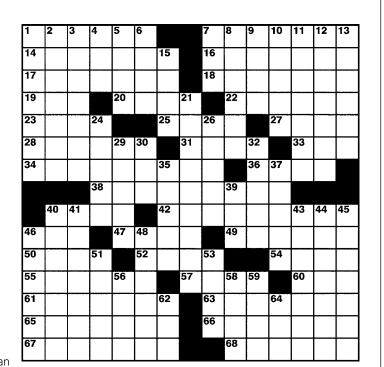
- 1 Colorful talkers
- 7 Makes a play for
- 14 Novel that strongly influenced the Robin Hood legend
- 16 Italian for "what is above"
- 17 Order
- 18 Order reinforcement
- 19 It may work with a plunger 20 "Pride goeth before . . "
- source: Abbr. 22 Things handed down
- 23 Fleet with stars on its tailfins
- 25 Photo finish focus, maybe
- 27 Cuisine using jasmine rice
- 28 Bask in
- 31 Irritant of a sort
- 33 "Catch, __ she change . . " Pope
- 34 Initiate a cooling trend
- 36 Offering uncertain footing
- 38 Volatile scenario 40 Park featuring Navajo
- Sandstone 42 Like the World Cup finals

- 46 Small beads
- 47 Dalmatian, for example
- 49 Release
- 50 Shelley's descriptor of heaven
- 52 Folks
- 54 Manila money
- 55 Three-time NL MVP
- 57 Umbrella features
- 60 Second-oldest US record label
- 61 Edith Wharton theme
- 63 Leave little to chance, perhaps
- 65 Party favorite
- 66 Oldest state capital
- 67 Common occurrence on 7 Down
- 68 Warded off

DOWN

- 1 Call a bad name
- 2 Anne of Green Gables town 3 Radio show with a wrench in
- its logo
- 4 One in a caste system
- 5 Bash

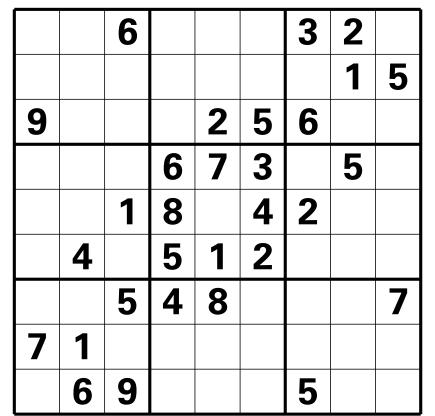
- 6 Captious
- 7TV vehicle for Justin Bieber
- 8 Course with novice budgeters
- 9 Took off on
- 10 Property
- 11 Top-10 surname in Spain
- 12 Not segmented
- 13 Richie's Happy Days pal 15 "The chief nurse of
- England's statesmen" 21 Element of much film noir
- 24 Put something over on
- 26 Draconian
- 29 Skating repertoire
- 30 Game _
- 32 Uproar
- 35 Campaign worker
- 37 Yellow-blooming perennial
- 39 Afterthought introducer
- 40 First name among American explorers
- 41 Setting of the 1945 Pulitzer Prize photo
- 43 Tracing paper, e.g.
- 44 Brand whose success was groundless?



- 45 Betrayed overloading
- 46 Ride (on)
- 48 Seasonal stat
- 51 Recess declaration
- 53 Enjoys at leisure 56 Bunch of waiters
- 58 Auto-finish protectors
- 59 On the way
- 62 Joined
- 64 National grp. since 1897 that elected its first male head in 2009

Sudoku

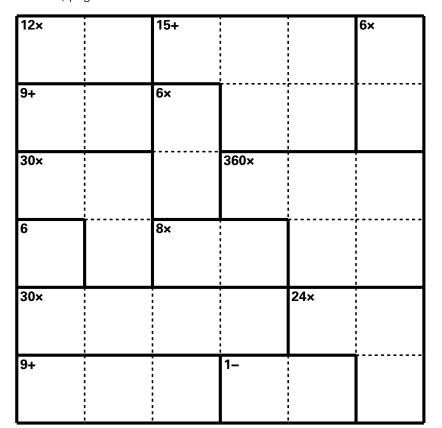
Solution, page 11



Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku

Solution, page 11



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1-6. Follow the mathematical operations for each box.

Edit Options **Buffers** Tools Im-Python Python Help import new_skills def learnMarketableJobSkills(): return linux, OSX, javascript, applescript, perl, python if you.interest == True: print "E-mail join@tech.mit.edu" --:---F1 joinTechno.py Tuesday, September 24, 2013

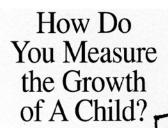
FYRE, from Page 1

of House 3, said that some houses within New House don't have very many returning upperclassmen. "When freshmen get back here, the houses look vacant," said Orona, "which turns a lot of freshmen off."

Orona emphasized, though, that the number of freshmen trying to switch out of has been going down from over 60 percent three years ago, to 51 percent, to 44 percent, and now 24 percent. REX events incorporating every house, coupled with a bigger emphasis on REX and CPW, have contributed to the decrease, said Orona.

Additionally, New House is also in the peculiar position of having many open rooms, according to Orona, when some other dorms have forced triples. Hemenway stated that when students move out of New House, those rooms are then made open to students wanting to move in. "When you are talking about building vacancies, you also have to look at the demand for the building," said Hemenway.

—Bruno Faviero



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Samuel A.Worthington, National Executive Director, Childreach with a sponsored child in Tarija, Bolivia.



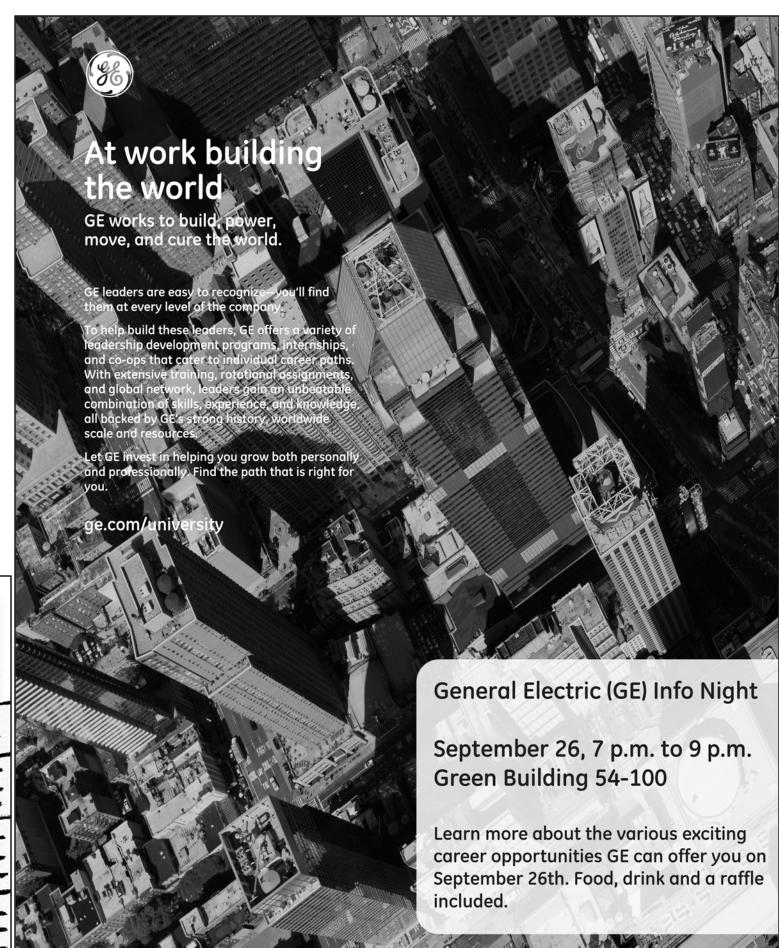


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New MIT innovation effort

Initiative seeks to involve manufacturing industry

Innovation from Page 1

tive, which began during Susan Hockfield's presidency, the new Innovation Initiative will connect related efforts at MIT under a name and mission intended to bring in money from corporate sponsors, philanthropists, foundations, and the government, according to associate provost Martin Schmidt in a phone interview with *The Tech*. MITEI has attracted \$100 million from the oil and gas companies BP, Eni, Saudi Aramco, and Shell alone, according to its website.

"We are eager to engage our industry allies in the challenge of shortening the time to market," Reif said, referring to the time it takes to develop and commercialize a new idea. "Making this vision real

will give innovators a competitive advantage."

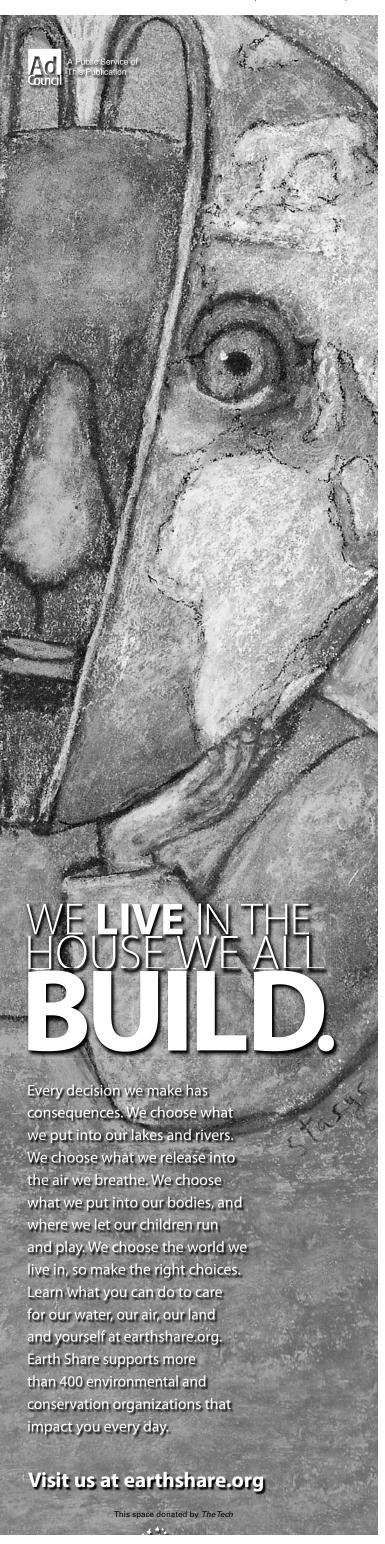
The initiative will support engineering research into areas such as continuous pharmaceutical manufacturing, which streamlines drug synthesis. It will also oversee policy research for innovation incentives.

The study contests the idea that manufacturing has no place in a highwage economy.

Programs like the Gordon-MIT Engineering Leadership Program and the MEng in Manufacturing offered by MechE would fall under the purview of the initiative's educational "pillar," according to Schmidt. Reif also said there could also be a role for edX, the online education initiative founded by MIT and Harvard.

To help MIT "walk the talk," Schmidt also said that the initiative would join the Martin Trust Center, the Deshpande Center, and contests like the 100K Competition in boosting entrepreneurship at MIT. This effort is analogous to MITEI's campus energy efficiency programs in that it promotes the initiative's vision through programs on campus.

Details about the initiative will be announced "in the next few weeks," Reif said. "I can tell you now that this will be a serious effort, and I believe it will make an important difference."



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TUESDAY, SEPTEMBER 24, 2013 THE TECH 11

Experimental treatment for muscular dystrophy

Treatment uses exon skipping to counteract genetic errors causing muscular dystrophy

By Andrew Pollack THE NEW YORK TIMES

Terri Ellsworth is convinced that her 12-year-old son Billy, who has Duchenne muscular dystrophy, is being helped by an experimental drug that counteracts the genetic mutation causing his disease.

His ability to walk has not deteriorated in the two years he has been on the drug, whereas many boys with the disease would be in wheelchairs by his age. Billy opened a Gatorade bottle by himself recently, beaming from ear to ear. He even took off down an uneven dirt path without falling.

"He never would have done that, ever," said Ellsworth, 55, a kitchen and bath designer from Coraopolis, Pa., outside Pittsburgh. "Without this drug, he would not be walking today."

Such anecdotal reports, and data from small clinical trials, have raised hopes that a new genetic technique called exon skipping may slow the progression of Duchenne muscular dystrophy, finally yielding a treatment for which parents have prayed for decades. Scientists say the technique or related ones might also point the way to treatments for other inherited diseases, including Huntington's.

The idea behind exon skipping is an ingenious one: a disease can be cured, or at least ameliorated, not by replacing a defective gene, as is done in gene therapy, but by correcting it.

"We're sort of manipulating what the gene is ultimately making," said Adrian R. Krainer, a professor of molecular genetics at the Cold Spring Harbor Laboratory.

Hopes for the new technique suffered a big blow Friday when the results of the first large randomized clinical trial of a drug designed to induce exon skipping were announced. The drug, called drisapersen, was no better than placebo in preserving muscle function of boys with Duchenne muscular dystrophy.

The announcement was devas-

Solution to Sudoku

4 8 3

2 5 6

2 7 6

3 6 9 7

8 9 4

Solution to Techdoku

5

5 1 2 8 4 8 1 9 1 8 9 5 6 4 3 2 6 9 2 3 7 5 8 1

8 4

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2 9

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6 4

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Solution to Crossword

MACAWS CHATSUP

TNT PROVEDICTS ELAL NOSE THAI

RELISHMITCH ERE MAKEPEACEMOOZY

TINDERBOX

PUJOLS RIBS RCA
ELITISM PREPLAN
NOMINEE SANTAFE
DNATEST STAYED

ZION MONTHLONG DEWESLAV WAIVER EBONEONES PESO

IVANHOE SORTOUT

tating to some parents of boys with muscular dystrophy and has raised questions about whether exon skipping will ever work. Could parents like Ellsworth be seeing only what they wish to see?

But some scientists and parents of children with muscular dystrophy said it was too early to write off the

"We are fully confident in the exon-skipping technology as a viable platform to develop a treatment for Duchenne, and Duchenne families should not give up hope," Debra Miller, chief executive of CureDuchenne, an advocacy group that sponsored research on the technique, said in a statement.

Drisapersen is being developed by GlaxoSmithKline and Prosensa, a small Dutch company whose stock lost 70 percent of its value after the announcement.

Billy Ellsworth is taking a different exon-skipping drug, eteplirsen, developed by Sarepta Therapeutics. The two drugs are different chemically, and it is possible that eteplirsen may prove more effective.

Duchenne, which affects as many as 15,000 Americans, mainly boys, is the most severe common form of muscular dystrophy, the focus of those Jerry Lewis telethons. There is no good treatment, though steroids help. Boys with Duchenne are typically in wheelchairs by their early teenage years and die from cardiac or respiratory failure in their

People with Duchenne have a genetic mutation that prevents their bodies from producing dystrophin, a protein that is a sort of coiled spring and acts as a shock absorber for muscles.

Genes contain the recipes for the body's proteins. They exist in the chromosomes in discrete segments called exons that are spliced together in RNA to form templates for proteins. Mutations resulting in missing exons can lead to the wrong proteins being produced, or none at

The chemical units in RNA, typically represented by the letters A, C, G and U, are read three letters at a time, with each three-letter combination specifying a particular amino acid, the building blocks of proteins. Sometimes, a three-letter combination starts in one exon and continues into the next.

Consider this stretch of oversimplified hypothetical exons: CA-UUUU-CAA-GAAG-CC. The protein recipe would be read CAU-UUU-CAA-GAA-GCC. But if the second exon, UUUU, were missing because of a mutation, the sequence would be read CAC-AAG-AAG. The wrong amino acids would be specified and the correct protein would not be

A clever, perhaps counterintuitive solution to this problem: create a drug that causes an additional exon to be deleted, or skipped, in a way that restores the proper reading. In this example, if the drug caused the initial exon, CA, to be deleted, the remaining sequence would be read CAA-GAA-GCC. The first two amino acids specified by the original sequence are missing, but the amino acids after that are the correct ones.

In muscular dystrophy, this exon-skipping technique results in a dystrophin protein missing a piece in the middle. But scientists are hoping that the protein is at least partly functional.

"It's a shock absorber," Hans Schikan, the chief executive of Prosensa, said. "If you miss a ring in a shock absorber, it still works."

The main measure used to assess the progression of Duchenne is how far a patient can walk in six minutes. Before beginning treatment, the 186 boys in the big drisapersen trial could walk an average of about 340 meters,

about 372 yards, in six minutes.

After 48 weeks of injections, the distance covered by those receiving placebo was about 53 meters less, on average, while those getting the drug walked 42 meters less. The difference was far from statistically significant. In smaller, earlier trials the difference had been closer to 30

Serepta's exon-skipping drug, eteplirsen, is being studied in only 12 boys. Two lost the ability to walk soon after starting on the drug. The others though, have had an average decline of only about 20 meters, or 6 percent, over 84 weeks.

Four boys who received a placebo drug weren't able to walk as far after the first six months of the trial, but they have stabilized since being switched to the drug.

For now, the question is whether any exon drug will ever be approved.

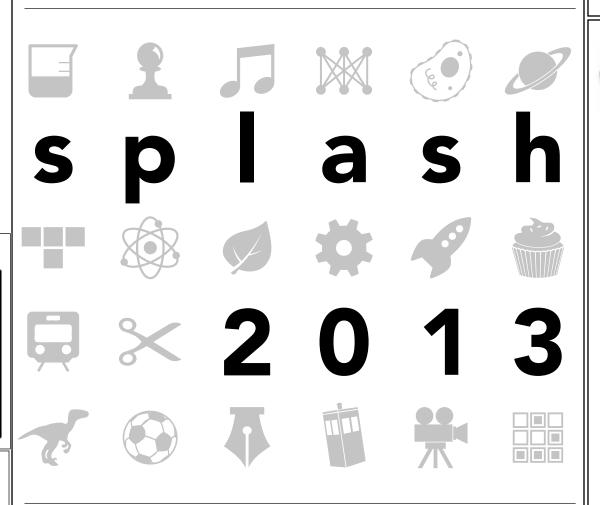
GlaxoSmithKline and Prosensa say they will continue to analyze the data from the disappointing latestage trial and others to see if certain patients might still benefit from drisapersen.

Sarepta plans to apply for approval of eteplirsen based on the results of its 12-patient trial. If it succeeds, the drug could get to market by the end of 2014.

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MIT Field Hockey wins 3-2 Engineers stay undefeated with NEWMAC win

By Mindy Brauer DAPER STAFF

Michelle H. Teplensky '13 and Molly K. Duffy '13 accounted for all of MIT's scoring in a 3-2 NEW-

MAC field hockey victory over Springfield College on Saturday afternoon. Teplensky produced two goals and an assist while Duffy had

one goal and an assist for the nationally-ranked No. 19 Engineers (7-0, 1-0 NEWMAC).

The Pride controlled play during the early stages as it opened the scoring in the 12th minute following four penalty corners and its fifth shot. MIT responded with a pair of goals by Teplensky that gave it a lead it would not relinquish. Her first marker came off a rebound in the 16th minute while

her second effort was set up by Duffy just over four minutes later. The remainder of the frame was a defensive battle as the Engineers were awarded four penalty corners but could not convert while keeping Springfield out of its offensive zone.

Duffy-Teplensky connection resulted in what proved to be the game-winning goal.

Faced with a new goalie in the second stanza, MIT immediately tested her with two shots on goal before the Duffy-Teplensky connection resulted in what proved to be the game-winning goal after five minutes elapsed. The momentum began to shift to the hosts following their own timeout in the 46th minute. Springfield recorded eight shots, five of which were on goal, and four penalty corners before cutting its deficit in half (3-2) with 10:53 on the clock. The Pride kept the pressure on down the stretch courtesy of a trio of penalty corners while its two attempts at tallying the equalizer were turned away by sophomore Evie S. Kyritsis '16 with 2:59 and 1:10 remaining in regulation.

Kyritsis finished the day with six saves while the Engineers were credited with two team saves. For the game, Springfield had a 15-14 edge in shots and an 11-6 margin in penalty corners.

MIT continues its roadtrip on Thursday, Sept. 26 when it visits non-conference foe Endicott College.

UPCOMING HOME EVENTS

Tuesday, September 24

SPORTS SHORT

Sailors of the Week

Two MIT sophomores chosen as

On the heels of their outstanding performance at the Toni

collegiate Sailing Association Women's Sailors of the

Week. The duo finished first in the B Division by a

margin of 28 points to help the Engineers secure second place out of 17 squads in the competition.

rounds, captured second in four outings and were

third on two occasions. The pair never finished out-

Lesh and Sukharev-Chuyan were victorious in five

Deutsch Regatta, MIT sophomores Rosalind R. Lesh '16 and Lisa

Sukharev-Chuyan '16 were selected as the New England Inter-

side the top 10 in the 17 rotations that were held on the Charles

tion this weekend at the Mrs. Hurst Bowl hosted by Dartmouth

The nationally-ranked No. 11 women's team returns to ac-

Women's Volleyball vs. Mount Holyoke College

7 p.m., Rockwell Cage

-Mindy Brauer

Thursday, September 26

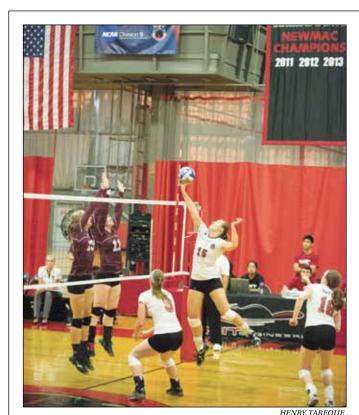
Sailing vs. Midweek Firefly Invite I

6 p.m., Charles River



RACHEL E. AVILES—THE TECH

The MIT sailing team braved grey skies and rain this past Sunday, Sept. 22 in a regatta against Boston University.



Rachel Hunt '14 spikes the ball during MIT's home volleyball game this Saturday, Sept. 21 against Springfield College.



SKANDA K. KOPPULA

Michelle Battipaglia '15 rushes after the ball in the women's soccer game on Saturday, Sept. 21 against WPI. MIT won 3-0.